

3.0m | 10ft ValuLine® High Performance, High XPD Antenna, dual-polarized, 7.125 – 8.500 GHz, grey, UBR84 flange

### **Product Classification**

Product Type Microwave antenna

General Specifications

Antenna Type HX - ValuLine® High Performance, High XPD

Antenna, dual-polarized

PolarizationDualAntenna InputUBR84Antenna ColorGray

Reflector Construction Two-piece reflector

Radome ColorGrayRadome MaterialFabricFlash IncludedYesSide Struts, Included2Side Struts, Optional3

Dimensions

**Diameter, nominal** 3.0 m | 10 ft

**Electrical Specifications** 

Operating Frequency Band 7.125 – 8.500 GHz

Gain, Low Band43.7 dBiGain, Mid Band44.4 dBiGain, Top Band45 dBiBoresite Cross Polarization Discrimination (XPD)33 dBFront-to-Back Ratio72 dBBeamwidth, Horizontal0.9 °

Beamwidth, Vertical 0.9 °



Return Loss 26 dB

**VSWR** 1.1

Radiation Pattern Envelope Reference (RPE) 7419

Electrical Compliance ACMA FX03\_7p5a | Brazil Anatel Class

2 | ETSI 302 217 Class 3

Cross Polarization Discrimination (XPD) Electrical Compliance ETSI EN 302217 XPD Category 2

Mechanical Specifications

Fine Azimuth Adjustment Range ±5°

Fine Elevation Adjustment Range ±5°

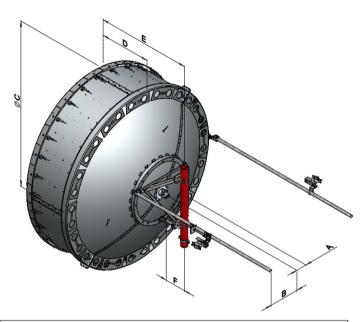
 Wind Speed, operational
 180 km/h | 111.847 mph

 Wind Speed, survival
 200 km/h | 124.274 mph



## Antenna Dimensions and Mounting Information

#### USX10



Dimensions in inches (mm)						
Antenna Size, ft (m)	А	В	С	D	E	F
10 (3)	8.0 (203)	22.5 (572)	125.0 (3174)	38.6 (980)	71.1 (1807)	10.3 (262)

### Wind Forces at Wind Velocity Survival Rating

**Axial Force (FA)** 18800 N | 4,226.409 lbf

Angle  $\alpha$  for MT Max -130  $^{\circ}$ 

**Side Force (FS)** -6560 N | -1,474.747 lbf

**Twisting Moment (MT)** -10725 N-m | -94,924.25 in lb

Force on Inboard Strut Side 9500 N | 2,135.686 lbf

Force on Outboard Strut Side 3350 N | 753.11 lbf

**Zcg without Ice** 618 mm | 24.331 in

**Zcg with 1/2 in (12 mm) Radial Ice** 744 mm | 29.291 in

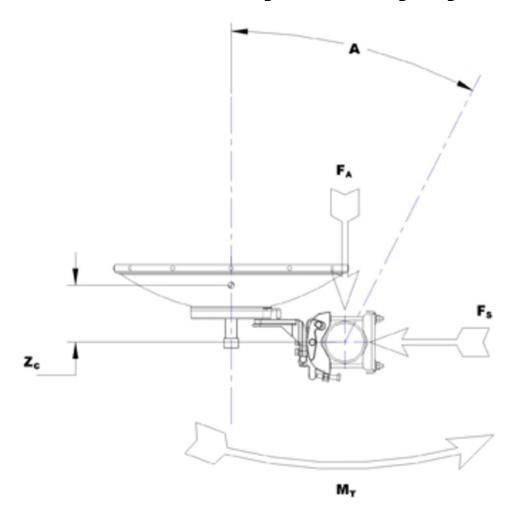


Weight with 1/2 in (12 mm) Radial Ice

466 kg | 1,027.353 lb



## Wind Forces at Wind Velocity Survival Rating Image



### Packaging and Weights

 Height, packed
 1170 mm | 46.063 in

 Width, packed
 1930 mm | 75.984 in

 Length packed
 3/410 mm | 13/4/252 in

**Length, packed** 3410 mm | 134.252 in

 Packaging Type
 Standard pack

 Volume
 7.7 m³ | 271.923 ft³

 Weight, gross
 513 kg | 1,130.97 lb

**Weight, net** 263 kg | 579.815 lb

Regulatory Compliance/Certifications



#### Agency

#### Classification

ISO 9001:2015

Designed, manufactured and/or distributed under this quality management system

#### \* Footnotes

Operating Frequency Band

Bands correspond with CCIR recommendations or common

allocations used throughout the world. Other ranges can be

accommodated on special order.

**Gain, Mid Band**For a given frequency band, gain is primarily a function of

antenna size. The gain of Andrew antennas is determined by either gain by comparison or by computer integration of the

measured antenna patterns.

Boresite Cross Polarization Discrimination (XPD)

The difference between the peak of the co-polarized main

beam and the maximum cross-polarized signal over an angle twice the 3 dB beamwidth of the co-polarized main beam.

Front-to-Back Ratio

Denotes highest radiation relative to the main beam, at 180°

±40°, across the band. Production antennas do not exceed rated values by more than 2 dB unless stated otherwise.

**Return Loss**The figure that indicates the proportion of radio waves

incident upon the antenna that are rejected as a ratio of

those that are accepted.

VSWR Maximum; is the guaranteed Peak Voltage-Standing-Wave-

Ratio within the operating band.

Radiation Pattern Envelope Reference (RPE)

Radiation patterns define an antenna's ability to discriminate

against unwanted signals. Under still dry conditions, production antennas will not have any peak exceeding the current RPE by more than 3dB, maintaining an angular

accuracy of +/-1° throughout

**Cross Polarization Discrimination (XPD) Electrical Compliance** The difference between the peak of the co-polarized main

beam and the maximum cross-polarized signal over an angle twice the 3 dB beamwidth of the co-polarized main beam.

Wind Speed, operational For VHLP(X), SHP(X), HX and USX antennas, the wind speed

where the maximum antenna deflection is  $0.3\,\mathrm{x}$  the  $3\,\mathrm{dB}$  beam width of the antenna. For other antennas, it is defined

as a deflection is equal to or less than 0.1 degrees.

Wind Speed, survival

The maximum wind speed the antenna, including mounts

and radomes, where applicable, will withstand without permanent deformation. Realignment may be required. This wind speed is applicable to antenna with the specified

amount of radial ice.

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Axial Force (FA)

parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.

Maximum forces exerted on a supporting structure as a result of wind from the most critical direction for this

Side Force (FS)

Maximum side force exerted on the mounting pipe as a result of wind from the most critical direction for this parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.

**Twisting Moment (MT)**Maximum forces exerted on a supporting structure as a result of wind from the most critical direction for this parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.

Packaging Type

Andrew standard packing is suitable for export. Antennas are shipped as standard in totally recyclable cardboard or wirebound crates (dependent on product). For your convenience, Andrew offers heavy duty export packing options.

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